

LOCALLY DELIVERED STATINS AS ADJUNCTIVE TREATMENT FOR PERIODONTITIS

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Aim: the present systematic review and meta-analysis aimed to assess the efficacy of locally delivered statins used in adjunct to scaling and root planing (SRP) compared with SRP alone.

Methods: the study protocol was registered in PROSPERO (CRD42020181742) and the search strategy used in this systematic review was based on the PRISMA guidelines. After electronic and hand search, only randomized controlled trials (RCTs) were included. Clinical attachment level gain (CALgain), probing depth reduction (PDred), modified sulcular bleeding index reduction (mSBIred) and intrabony defect reduction (IBDred) were the investigated outcomes. The quality of the included studies was assessed using the Cochrane Risk of Bias Tool for RCTs (RoB 2). Meta-analysis was performed and the power of the meta-analytic findings determined by trial sequential analysis (TSA). Studies were also sub-grouped basing on the type of statin used. Statistical heterogeneity and publication bias were assessed.

Results: twenty RCTs were included (1212 patients, 1289 defects). An overall statistically significant effect size in favour of statins for CALgain ($P = .002$) and PDred ($P = .000$) was found. Differently from atorvastatin and rosuvastatin, simvastatin did not reach statistical significance for these outcomes. TSA confirmed that the meta-analysis had sufficient power to detect the beneficial effect of statins over the control treatment for these outcomes.

Conclusion: within the limits of the available studies, the local administration of statins in adjunct to SRP might add significant improvement in terms of CALgain and PDred compared with SRP alone. The high data heterogeneity, however, imposes caution. No approved preparations exist, and further well-designed RCTs would be needed to confirm the beneficial effects of the different types of statins in the non surgical treatment of the periodontitis.

EFFICACY OF SUBGINGIVAL AIR-POLISHING WITH ERYTHRITOL POWDER IN PERIODONTAL DISEASE

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Aim: to date, scarce evidence exists around the application of subgingival air polishing during treatment of severe periodontitis. The aim of this study was to evaluate the benefits of subgingival air polishing during non-surgical treatment of deep bleeding pockets in stages III–IV periodontitis patients.

Methods: forty patients with stages III–IV periodontitis were included, and pockets with probing depth (PD) 5–9 mm and bleeding on probing (BoP) were selected as experimental sites. All patients underwent a full-mouth session of erythritol powder supragingival air polishing and ultrasonic instrumentation. Test group received additional subgingival air polishing at experimental sites. The proportion of experimental sites shifting to $PD \leq 4$ mm in absence of BoP at 3 months (i.e., non-bleeding closed pockets, NBCPs) was regarded as the primary outcome variable.

Results: the proportion of NBCP was comparable between test and control group (47.9 and 44.7%, respectively). Baseline PD of 7–9 mm, multi-rooted teeth and the presence of plaque negatively influenced the probability of obtaining NBCP.

Conclusion: the additional application of subgingival air polishing does not seem to provide any significant clinical advantage in achieving closure at moderate to deep bleeding pockets in treatment of stages III–IV periodontitis patients. The study was registered on ClinicalTrials.gov (NCT04264624). Clinical relevance While air polishing can play a role in biofilm removal at supragingival and shallow sites, ultrasonic root surface debridement alone is still the choice for non-surgical treatment of deep bleeding periodontal pockets.